

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) Method for making a field effect transistor comprising a source (10) and a drain (11) connected by a channel (7) controlled by a gate electrode (5) separated from the channel (7) by a gate insulator (3), the channel (7) being formed by a diamond-like carbon layer (1), method ~~characterized in that it successively comprises~~ comprising

- deposition of a diamond-like carbon layer (1) on a substrate (2),
- deposition of an insulating gate layer (3) on the diamond-like carbon layer (1),
- deposition, on the insulating gate layer (3), of at least one conducting layer (4) and etching of the latter so as to form the gate electrode (5),
- deposition of an insulating material on flanks of the gate electrode (5) to form a lateral insulator (6),
- etching of the gate insulating layer (3),
- etching of the diamond-like carbon layer (1) so as to delineate the channel (7),
- deposition, on each side of the channel (7), of a semi-conducting material (9a) designed to form the source (10) and of a semi-conducting material (9b) designed to form the drain (11).

2. (Currently Amended) Method according to claim 1, ~~characterized in that~~ wherein etching of the diamond-like carbon layer (1) is isotropic so as to obtain a retraction of the diamond-like carbon layer (1) under the gate insulating layer (3).

3. (Currently Amended) Method according to claim 2, ~~characterized in that it comprises~~ comprising anisotropic etching of the semi-conducting materials (9a, 9b) in the zones of the substrate (2) not covered by the gate electrode (5) and the lateral insulator (6).

4. (Currently Amended) Field effect transistor comprising a channel (7) formed by a diamond-like carbon layer (1), transistor ~~characterized in that it is obtained by a method according to any one of the claims 1 to 3~~ claim 1.

5. (Currently Amended) Transistor according to claim 4, ~~characterized in that~~ wherein the channel (7) comprises N-type dopants so as to form a PMOS type transistor (13).

6. (Currently Amended) Transistor according to claim 4, ~~characterized in that~~ wherein the channel (7) comprises P-type dopants so as to form a NMOS type transistor (14).

7. (Currently Amended) CMOS logic gate, ~~characterized in that it comprises~~ comprising at least one PMOS type transistors (13, 14) according to claim 5 and at least one NMOS type transistors ~~according to claim 6~~, the PMOS and NMOS type transistors having substantially the same dimensions.

8. (New) CMOS logic gate, comprising at least one PMOS type transistor and at least one NMOS type transistor according to claim 6, the PMOS and NMOS type transistors having substantially the same dimensions.